



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re the application of:

BAILEY III et al.

Application No. 10/769,498

Filed: January 30, 2004

For: STRESS FREE ETCH PROCESSING IN  
COMBINATION WITH A DYNAMIC LIQUID  
MENISCUS

)  
) Group Art Unit: 2811  
)  
) Examiner: Unassigned  
)  
) Atty. Docket No. LAM2P447  
)  
) Date: July 6, 2005

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on July 6, 2005.

Signed:

Melinda M. Ward

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Alexandria, VA 22313-1450

Dear Sir:

The references listed in the attached PTO Form 1449, a copy of which is attached, may be material to examination of the above-identified patent application. Applicants submit these references in compliance with their duty of disclosure pursuant to 37 CFR §§ 1.56 and 1.97. The Examiner is requested to consider these references and to acknowledge such consideration by initialing the appropriate location on the attached PTO Form 1449.

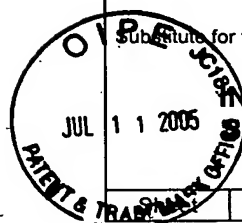
This Information Disclosure Statement (IDS) is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This IDS is believed to be filed before the mailing date of a first Office Action. Accordingly, it is believed that no fees are due in connection with the filing of this IDS. However, if it is determined that any fees are due, then the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0805 (Order No. LAM2P447).

Respectfully submitted,  
MARTINE PENILLA & GENCARELLA, LLP

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Customer Number 25920



Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		Application Number	10/769,498
		Filing Date	January 30, 2004
		First Named Inventor	Bailey
		Art Unit	2811
		Examiner Name	Unassigned
		Attorney Docket Number	LAM2P447
1	of	4	

**U.S. Patent Documents**

Examiner Initials	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	A1	US 2004/242012	Dec 2, 2004	Ikeda	
	B1	6,767,829	Jul 27, 2004	Akahori	
	C1	6,600,229	Jul 29, 2003	Mukherjee et al.	
	D1	6,482,755	Nov 19, 2002	Ngo et al.	
	E1	6,440,840	Aug 27, 2002	Chen	
	F1	6,417,093	Jul 9, 2002	Xie et al.	
	G1	6,383,935	May 7, 2002	Lin et al.	
	H1	6,350,364	Feb 26, 2002	Jang	
	I1	6,350,664	Feb 26, 2002	Haji et al.	

**Foreign Patent Documents**

Examiner Initial	Cite No. <sup>1</sup>	Foreign Patent Document No.	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number- <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	J1	EP 1 320 128 A1	06/18/03	AMI Semiconductor		<input type="checkbox"/>
	K1	WO 03/026004	03/27/03	Tokyo Electron Limited		<input type="checkbox"/>
	L	EP 1 081 751 A2	03/07/01	Applied Materials		<input type="checkbox"/>
	M1	EP 1 041 614 A1	10/04/00	LSI Logic Corporation		<input type="checkbox"/>
	N1	JP 11 067766	03/09/99	Sony Corp.		<input type="checkbox"/>

**Non Patent Literature Documents**

Examiner Initial	Cite No.	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
	O1	TEGAL CORPORATION, "Enabling a Wireless World", page 1, <a href="http://www.tegal.com/">http://www.tegal.com/</a>
	P1	TEGAL CORPORATION, "Corporate Information", pages 1-7, <a href="http://www.tegal.com/corp/corpinfo.html">http://www.tegal.com/corp/corpinfo.html</a>
	Q1	TEGAL CORPORATION, "Products and Services", page 1, <a href="http://www.tegal.com/prod_srvcs/products_serv.html">http://www.tegal.com/prod_srvcs/products_serv.html</a>

Examiner Signature	Date Considered
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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language translation is attached.

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	A2	6,323,121	Nov 27, 2001	Liu et al.	
	B2	US 2001/018271	Aug 30, 2001	Yanagisawa	
	C2	US 2001/015175	Aug 23, 2001	Masuda et al.	
	D2	US 2001/003060	Jun 7, 2001	Yokohama et al.	
	E2	6,234,870	May 22, 2001	Uzoh et al.	
	F2	6,221,775	Apr 24, 2001	Ference et al.	
	G2	6,096,230	Aug 1, 2000	Scatz et al.	
	H2	6,051,496	Apr 18, 2000	Jang	

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		Country Code <sup>3</sup> -Number- <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	I2	WO 02/37541 A2	May 10, 2002	Applied Materials Inc.		<input type="checkbox"/>
	J2	WO 00/59005	Oct 5, 2000	Tokyo Electron Limited		<input type="checkbox"/>
	K2					<input type="checkbox"/>
	L2					<input type="checkbox"/>
	M2					<input type="checkbox"/>

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	N2	TEGAL CORPORATION, "Products and Services, 6500 Hre Series", pages 1-3, <a href="http://www.tegal.com/prod_srvcs/6500_prod.html">http://www.tegal.com/prod_srvcs/6500_prod.html</a>
	O2	TEGAL CORPORATION, "Products and Services, 900 Series", pages 1-4, <a href="http://www.tegal.com/prod_srvcs/900_prod.html">http://www.tegal.com/prod_srvcs/900_prod.html</a>
	P2	TEGAL CORPORATION, "Products and Services, Tegal i90X-The Next Generation in Plasma Etch Technology", pages 1-4, <a href="http://www.tegal.com/prod_srvcs/i90x_data_sheet.html">http://www.tegal.com/prod_srvcs/i90x_data_sheet.html</a>
	Q2	

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	C3				
	D3				
	E3				
	F3				
	G3				
	H3				

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		Country Code <sup>3</sup> -Number- <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	I3	WO 99/46812	Sep 16, 1999	Applied Materials Inc.		<input type="checkbox"/>
	J3					<input type="checkbox"/>
	K3					<input type="checkbox"/>
	L3					<input type="checkbox"/>
	M3					<input type="checkbox"/>

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	N3	NAGRAJ S. KULKARNI, ROBERT T. DeHOFF, "Application of Volatility Diagrams for Low Temperature, Dry Etching, and Planarization of Copper", Journal of The Electromechanical Society, 2002, pp G620 - G632
	O3	KAZUhide OHNO, MASAaki SATO, YOSHINOBU ARITA, "Reactive Ion Etching of Copper Films in SiCl <sub>4</sub> and N <sub>2</sub> Mixture", Japanese Journal of Applied Physics, June 1989, No. 6, Part 2, pp 1070 - 1072
	P3	
	Q3	

Examiner Signature		Date Considered	
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	C4				
	D4				
	E4				
	F4				
	G4				
	H4				

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		Country Code <sup>3</sup> -Number- <sup>4</sup> Kind Code <sup>5</sup> (if known)				
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	J4					<input type="checkbox"/>
	K4					<input type="checkbox"/>
	L4					<input type="checkbox"/>
	M4					<input type="checkbox"/>

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	N4	K. MOSIG, T. JACOBS, P. KOFRON, M. DANIELS, K. BRENNAN, A. GONZALES, R. AUGUR, J. WETZEL, R. HAVEMANN, A. SHIOTA, "Single and Dual Damascene Integration of a Spin-on Porous Ultra low-k Material", <i>IEEE</i> , 2001 pp. 292 - 294
	O4	DAVID T. PRICE, RONALD J. GUTMANN, SHYAM P. MURARKA, "Damascene copper interconnects with polymer ILDs", 1997 Thin Solid Films, pp. 523 - 528
	P4	
	Q4	

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